Amendments to the Claims:

Please amend the claims of the present application as set forth below. A detailed listing of all claims is provided. A status identifier is provided for each claim in a parenthetical expression following each claim number. Changes to the claims are shown by strikethrough (for deleted matter) or underline (for added matter). This listing of claims will replace all prior versions and listings of the claims in the applications.

1. (Currently amended): An ultra-thin optical fingerprint sensor with anamorphic optics comprising:

an image receiving panel;

an anamorphic optical lens of at least two optical magnification power;

a light source to illuminate the image receiving panel creating an illuminating light path;

a folding mirror to fold a light reflection from an image deposited on the image receiving panel through the image receiving panel to the anamorphic lens creating a folded light path; and

an image sensor; wherein the image sensor captures the light reflection optically compensated by the anamorphic optical lens;

wherein the folded light path defines a ~~principal~~ plane; wherein the illuminating light path does not lie in the ~~principal~~ plane; and wherein the illuminating path is substantially parallel to said image receiving panel.

2. (Previously amended): The ultra-thin optical fingerprint sensor of claim 1 wherein the anamorphic optical lens comprises a horizontal cylindrical lens and a vertical cylindrical lens.

3. (Currently amended): The ultra-thin optical fingerprint sensor of claim 1 wherein the illuminating light path is substantially perpendicular to the ~~principal~~ plane; wherein the folding mirror folds the folded light path by substantially 180 degrees.

4. (Original): The ultra-thin optical fingerprint sensor of claim 3 wherein the light source comprises a light emitting diode (LED).

5. (Currently amended): An ultra-thin optical scanner with anamorphic optics comprising:

an image receiving panel;

an anamorphic optical lens of at least two optical magnification power;

a light source to illuminate the image receiving panel creating an illuminating light path;

a folding mirror to fold a light reflection from an image deposited on the image capturing panel through the image capturing panel to the anamorphic lens creating a folded light path; and

an image sensor; wherein the image sensor captures the light reflection optically compensated by the anamorphic optical lens;

wherein the folded light path defines a ~~principal~~ plane; wherein the illuminating light path does not lie in the ~~principal~~ plane; and wherein the illuminating path is substantially parallel to said image receiving panel.

6. (Previously amended): The ultra-thin optical scanner of claim 5 wherein the anamorphic optical lens comprises a horizontal cylindrical lens and a vertical cylindrical lens.

7. (Currently amended): The ultra-thin optical scanner of claim 5 wherein the illuminating light path is substantially perpendicular to the ~~principal~~ plane; wherein the folding mirror folds the folded light path by substantially 180 degrees.

8. (Original): The ultra-thin optical scanner of claim 7 wherein the light source comprises a light emitting diode (LED).

9. (Currently amended): An ultra-thin optical image sensor with anamorphic optics comprising:

an image receiving panel;

an anamorphic optical lens of at least two optical magnification power;

a light source to illuminate the image receiving panel creating an illuminating light path;

a folding mirror to fold a light reflection from an image deposited on the image capturing panel through the image capturing panel to the anamorphic lens creating a folded light path; and

an image sensor; wherein the image sensor captures the light reflection optically compensated by the anamorphic optical lens;

wherein the folded light path defines a ~~principal~~ plane; wherein the illuminating light path does not lie in the ~~principal~~ plane; and wherein the illuminating path is substantially parallel to said image receiving panel.

10. (Previously amended): The ultra-thin optical image sensor of claim 9 wherein the anamorphic optical lens comprises a horizontal cylindrical lens and a vertical cylindrical lens.

11. (Currently amended): The ultra-thin optical image sensor of claim 9 wherein the illuminating light path is substantially perpendicular to the ~~principal~~ plane; wherein the folding mirror folds the folded light path by substantially 180 degrees.

12. (Previously amended): The ultra-thin optical image sensor of claim 11 wherein the light source comprises a light emitting diode (LED).

13. (Previously amended): The ultra-thin optical fingerprint sensor of claim 1 further comprising a bending mirror to bend the light reflection from the anamorphic lens to the image sensor.

14. (Previously amended): The ultra-thin optical fingerprint sensor of claim 13 wherein the anamorphic optical lens comprises a horizontal cylindrical lens and a vertical cylindrical lens.

15. (Currently amended): The ultra-thin optical fingerprint sensor of claim 13 wherein the illuminating light path is substantially perpendicular to the ~~principal~~ plane; wherein the folding mirror folds the folded light path by substantially 180 degrees.

16. (Original): The ultra-thin optical fingerprint sensor of claim 15 wherein the light source comprises a light emitting diode (LED).

17. (Previously amended): The ultra-thin optical scanner of claim 5 further comprising a bending mirror to bend the light reflection from the anamorphic lens to the image sensor.

18. (Previously amended): The ultra-thin optical scanner of claim 17 wherein the anamorphic optical lens comprises a horizontal cylindrical lens and a vertical cylindrical lens.

19. (Currently amended): The ultra-thin optical scanner of claim 17 wherein the illuminating light path is substantially perpendicular to the ~~principal~~ plane; wherein the folding mirror folds the folded light path by substantially 180 degrees.

20. (Original): The ultra-thin optical scanner of claim 19 wherein the light source comprises a light emitting diode (LED).

21. (Previously amended): The ultra-thin optical image sensor of claim 9 further comprising a bending mirror to bend the light reflection from the anamorphic lens to the image sensor.

22. (Previously amended): The ultra-thin optical image sensor of claim 21 wherein the anamorphic optical lens comprises a horizontal cylindrical lens and a vertical cylindrical lens.

23. (Currently amended): The ultra-thin optical image sensor of claim 21 wherein the illuminating light path is substantially perpendicular to the ~~principal~~ plane; wherein the folding mirror folds the folded light path by substantially 180 degrees.

24. (Original): The ultra-thin optical image sensor of claim 23 wherein the light source comprises a light emitting diode (LED).

25. (Currently amended): A method for ultra-thin optical fingerprint sensor comprising:

illuminating an image receiving panel via a light source creating an illuminating light path, wherein the illuminating light path is substantially parallel to said image receiving panel;

receiving an image on the image receiving panel;

folding a light reflection from the image through the image receiving panel to an anamorphic lens creating a folded light path; wherein the folded light path defines a ~~principal~~ plane; wherein the illuminating light path does not lie in the ~~principal~~ plane;

processing the received image through the anamorphic lens; and

capturing and storing the processed image from the anamorphic lens.

26. (Currently amended): A method for ultra-thin optical scanner comprising:

illuminating an image receiving panel via a light source creating an illuminating light path, wherein the illuminating light path is substantially parallel to said image receiving panel;

receiving an image on the image receiving panel;

folding a light reflection from the image through the image receiving panel to an anamorphic lens creating a folded light path; wherein the folded light path defines a ~~principal~~ plane; wherein the illuminating light path does not lie in the ~~principal~~ plane;

processing the received image through the anamorphic lens; and

capturing and storing the processed image from the anamorphic lens.

27. (Currently amended): A method for ultra-thin optical image sensor comprising:

illuminating an image receiving panel via a light source creating an illuminating light path, wherein the illuminating light path is substantially parallel to said image receiving pane;

receiving an image on the image receiving panel;

folding a light reflection from the image through the image receiving panel to an anamorphic lens creating a folded light path; wherein the folded light path defines a ~~principal~~ plane; wherein the illuminating light path does not lie in the ~~principal~~ plane;

processing the received image through the anamorphic lens; and

capturing and storing the processed image from the anamorphic lens.

28. (Previously amended): The method of Claim 25 wherein the step of processing the received image comprises:

compensating the received image with the anamorphic lens; and

bending the light reflection via a bending mirror to direct the compensated image towards an image sensor to capture the compensated image.

29. (Previously amended): The method of Claim 26 wherein the step of processing the received image comprises:

compensating the received image with the anamorphic lens; and

bending the light reflection via a bending mirror to direct the compensated image towards an image sensor to capture the compensated image.

30. (Previously amended): The method of Claim 27 wherein the step of processing the received image comprises:

compensating the received image with the anamorphic lens; and

bending the light reflection via a bending mirror to direct the compensated image towards an image sensor to capture the compensated image.